# CHAPTER VI

## OTHER ENVIRONMENTAL STATUTES

***In this chapter…***



## OVERVIEW

Congress has passed many environmental laws to address releases, or threats of releases, of hazardous constituents. An understanding of these laws is necessary to understand how RCRA fits into the national environmental protection system. Each environmental statute has its own particular focus, whether it is controlling the levels of pollutants introduced into a single environmental medium (i.e., air, soil, or water) or addressing a specific area of concern, such as pesticides or waste cleanup.

The media-, practice-, and chemical-specific boundaries established in the nation's environmental statutes are often arbitrary. Many different types of practices may be responsible for the release into the environment of the same contaminant. Moreover, individual contaminants are not confined to specific media. Volatile organic compounds, such as benzene or toluene, can be released into and contaminate the air, soil, and water. Additionally, uncontrolled pollutants may travel long distances by natural means, and they may change physically, affecting multiple media. Therefore, a media- or contaminant-specific approach cannot fully address the magnitude and complexities of the waste management problem. This section introduces each of these environmental protection statutes and highlights their differences from RCRA.

Many of these statutes interact closely and even overlap with RCRA. In order to avoid overregulation of industry and coordinate environmental protection laws, Congress required that EPA, when promulgating environmental regulations, ensure consistency with and avoid duplication of regulatory provisions promulgated under other environmental statutes.

One statute in particular, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund, is closely aligned with RCRA. Both programs are similar in that their primary purpose is to protect human health and the environment from the dangers of hazardous waste. However, these statutes address the hazardous waste problem from two fundamentally different approaches:

- RCRA has a pollution prevention regulatory focus which encourages waste reduction and controls waste from the moment of generation until final disposal
- CERCLA has a response focus. Whenever there has been a breakdown in the waste management system (e.g., a release or a potential threat of a release of a hazardous substance, pollutant, or contaminant), CERCLA authorizes cleanup actions.

Considering the close relationship and similarities between RCRA and CERCLA, this chapter examines the CERCLA regulatory program and its interaction with RCRA.

This chapter consists of two parts:

- Legislative Framework for Addressing Hazardous Waste Problems — Outlines the environmental statutes designed to protect human health and the environment from exposure to hazardous waste and contaminants and highlights their major interactions with RCRA
- Superfund: The Hazardous Waste Cleanup Program — Focuses on one crucial aspect of this legislative framework, the CERCLA hazardous waste cleanup program and its interactions with RCRA.

# LEGISLATIVE FRAMEWORK FOR ADDRESSING HAZARDOUS WASTE PROBLEMS



## OVERVIEW

The legislation that serves as the basis for managing hazardous wastes can be divided into two categories:

- Media-specific statutes that limit and monitor the amount of pollutants introduced into the air, waterways, oceans, and drinking water
- Other statutes that directly limit the production, rather than the release, of chemical substances and products that may contribute to the nation's wastes.

## ENVIRONMENTAL STATUTES

In order to adequately protect human health and the environment from exposure to hazardous waste and contaminants, Congress enacted several regulatory programs to protect the nation's air and water resources, as well as ensure the safety of public health.

### ■ Clean Air Act

The Clean Air Act limits the emission of pollutants into the atmosphere. Such pollutants include: sulfur dioxide, particulate matter, nitrogen dioxide, carbon monoxide, ozone, and lead. EPA established the **National Ambient Air Quality Standards** (NAAQS). Congress also mandated that CAA control emissions from specific industrial sources. Using this statutory authority, EPA designated hazardous air pollutants and set **National Emission Standards for Hazardous Air Pollutants** (NESHAPs). The states have primary responsibility for implementing both the NAAQS and NESHAPs requirements.

### ■ Clean Water Act

The **Clean Water Act** (CWA) imposes pollutant limitations for all discharges of wastewater from identifiable ("point") sources into the nation's waterways. These discharges are defined as either direct discharges, indirect discharges, or zero discharges.

**Direct discharges** are discharges from "point sources" into surface water pursuant to a National

Pollutant Discharge Elimination System (NPDES) permit. NPDES permits limit the permissible concentration of toxic constituents or conventional pollutants in effluents discharged to a waterway.

Under **indirect discharges**, the wastewater is first sent to a publicly owned treatment works (POTW), and then after treatment by the POTW, discharged pursuant to an NPDES permit. Under these requirements, the generator of the wastes cannot simply transfer the waste materials to a POTW. Rather, the wastes must satisfy applicable treatment and toxic control requirements known as pretreatment standards, where they exist. POTWs that receive hazardous wastes for treatment are also subject to certain RCRA permit-by-rule requirements (as discussed in Chapter III, Permitting of Treatment, Storage, and Disposal Facilities), and remain subject to RCRA corrective action.

**Zero discharges** mean that the wastewater is not being discharged to a navigable water, but rather is being land disposed (e.g., through spray irrigation) or disposed by underground injection. Zero discharge facilities are subject to federal or state regulatory limitations that are as strict as those that apply to direct and indirect dischargers.

CWA also includes provisions intended to prevent oil spills into the navigable waters of the United States. These **Spill Prevention, Control, and Countermeasures** (SPCC) regulations establish spill prevention procedures and equipment requirements for nontransportation-related facilities with certain aboveground or underground oil storage capacities that could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines.

## ■ Safe Drinking Water Act

The **Safe Drinking Water Act** (SDWA) protects the nation's drinking water supply by establishing national drinking water standards (maximum contaminant levels (MCLs) or specific treatment techniques), and by regulating underground injection control (UIC) wells. The UIC program bans some types of underground disposal of RCRA hazardous wastes. With some exceptions, other materials cannot be injected underground without a UIC permit.

## ■ Emergency Planning and Community Right-to-Know Act

Congress amended CERCLA in 1986 with the enactment of the **Superfund Amendments and Reauthorization Act** (SARA). These amendments improved the Superfund program and added an important section that focused on strengthening the rights of citizens and communities in the face of potential hazardous substance emergencies. This section, SARA Title III, or the **Emergency Planning and Community Right-to-Know Act** (EPCRA), was enacted in response to the more than 2,000 deaths caused by the release of a toxic chemical in Bhopal, India.

EPCRA is intended to help communities prepare to respond in the event of a chemical emergency, and to increase the public's knowledge of the presence and threat of hazardous chemicals. To this end, EPCRA requires the establishment of state and local committees to prepare communities for potential chemical emergencies. The focus of the preparation is a community emergency response plan that must: 1) identify the sources of potential emergencies; 2) develop procedures for responding to emergencies; and 3) designate who will coordinate the emergency response.

EPCRA also requires facilities to notify the appropriate state and local authorities if releases of certain chemicals occur. Facilities must also compile specific information about hazardous chemicals they have on site and the threats posed by those substances. Some of this information must be provided to state and local authorities. More specific data must be made available upon request from those authorities or from the general public.

## ■ Federal Insecticide, Fungicide, and Rodenticide Act

The **Federal Insecticide, Fungicide, and Rodenticide Act** (FIFRA) provides procedures for the registration of pesticide products to control their introduction into the marketplace. As such,

its regulatory focus is different from most of the statutes discussed in this chapter. While the other statutes attempt to minimize and manage waste by-products at the end of the industrial process, FIFRA controls whether (and how) certain products are manufactured or sold in the first place.

FIFRA imposes a system of pesticide product registrations. Such requirements include pre-market review of potential health and environmental effects before a pesticide can be introduced in the United States, reregistration of products introduced prior to the enactment of FIFRA to assess their safety in light of current standards, and classification of pesticides for restricted or general use. Restricted products can be used only by those whose competence has been certified by a state program.

## ■ Toxic Substances Control Act

The primary focus of the **Toxic Substances Control Act** (TSCA) is similar to that of FIFRA in that the statute provides authorities to control the manufacture and sale of certain chemical substances. These requirements include testing of chemicals that are currently in commercial production or use, pre-market screening and regulatory tracking of new chemical products, and controlling unreasonable risks once a chemical substance is determined to have an adverse effect on health or the environment. TSCA controls on such unreasonable risks includes prohibiting the manufacture or certain uses of the chemical, requiring labeling, limiting volume of production or concentration, requiring replacement or repurchase of products, and controlling disposal methods.

## ■ Polychlorinated Biphenyls (PCBs)

The 40 CFR Part 761 regulations define polychlorinated biphenyls (PCBs) as any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of PCB-containing substances. PCBs have been demonstrated to cause a variety of adverse health effects. As a result, EPA has developed regulations for the proper use, cleanup, and disposal of PCBs pursuant to TSCA. The management of the TSCA regulations for PCBs has historically been handled by the EPA Office of Prevention, Pesticides and Toxic Substances (OPPTS). However, EPA has transferred the management of the PCB cleanup and disposal program from its current location in OPPTS to the Office of Solid Waste and Emergency Response (OSWER). This transfer was effective on October 1, 2007.

In general, all of the sections of the PCB regulations at Part 761 relating to cleanup and disposal will be administered by OSWER. These regulations include general requirements for the cleanup and disposal of PCBs, as well as specific requirements for managing PCB remediation waste, disposal of PCB bulk product waste, storage and disposal of PCB household waste, and disposal of PCB-containing waste generated during and as a result of research and development activities.

The TSCA PCB disposal regulations set forth a number of basic principles. First, all allowed uses must be disposed at the end of their useful life, and all waste coming out of use must be disposed within one year. Liquids are stringently regulated; non-liquids are less stringently regulated. Some disposal requirements are performance-based and some are risk-based. The risk standard is "no unreasonable risk of injury to health or the environment." All required disposal must be at facilities approved in the regulations or by EPA. Finally, as with RCRA, states may require more stringent disposal.

Specific requirements for PCB cleanup and disposal that will be administered by OSWER include the following:

- Marking of waste containers, equipment stored for reuse or disposal, and areas used to store PCBs for disposal
- Storage of PCBs for disposal, including a time limitation, criteria for storage facilities, and closure requirements
- Incineration of PCBs, including combustion efficiency criteria, monitoring, procedures for waivers, and notification

- Requirements for high efficiency boilers, scrap metal recovery ovens, and chemical waste landfills
- Coordinated approval for PCB waste management
- Decontamination standards and procedures
- Requirements for import or export for disposal
- PCB spill cleanup policy
- General recordkeeping and reporting requirements, such as annual reports and manifests
- PCB waste disposal records and reports
- Sampling requirements and procedures

Updates and information will be posted as they become available at www.epa.gov/pcb.

In recent years, EPA has learned that caulk containing potentially harmful PCBs was used in many buildings, including schools, in the 1950s through the 1970s. In general, schools and buildings built after 1978 do not contain PCBs in caulk. On September 25, 2009, EPA announced new guidance for school administrators and building managers with important information about managing PCBs in caulk and tools to help minimize possible exposure. EPA also announced additional research into this issue. There are several unresolved scientific questions that must be better understood to assess the magnitude of the problem and identify the best long-term solutions. For example, the link between the concentrations of PCBs in caulk and PCBs in the air or dust is not well understood. The Agency is doing research to determine the sources and levels of PCBs in schools and to evaluate different strategies to reduce exposures. The results of this research will be used to provide further guidance to schools and building owners as they develop and implement long-term solutions.

Additional information about PCBs in caulk can be found at www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk.

## ■ Marine Protection, Research, and Sanctuaries Act

The **Marine Protection, Research, and Sanctuaries Act** (MPRSA) requires a permit for any material that is transported from a U.S. port or by a U.S. vessel for deposition at sea.

There are two major areas of overlap between MPRSA and RCRA. MPRSA prevents waste from a RCRA generator or TSDF from being deposited into the ocean, except in accordance with a separate MPRSA permit. In addition, dredged materials subject to the requirement of a MPRSA §103 permit are not considered hazardous wastes under RCRA.

## ■ Occupational Safety and Health Act

The mission of the **Occupational Safety and Health Act** (OSHA) is to save lives, prevent injuries, and protect the health of employees in the workplace. OSHA accomplishes these goals through several regulatory requirements including the **Hazard Communication Standard** (HCS), and the **Hazardous Waste Operations and Emergency Response Worker Protection Standard** (HAZWOPER).

The HCS was promulgated to provide workers with access to information about the hazards and identities of the chemicals they are exposed to while working, as well as the measures they can take to protect themselves. OSHA's HCS requires employers to establish hazard communication programs to transmit information on the hazards of chemicals to their employees by means of labels on containers, material safety data sheets, and training programs.

The HAZWOPER was developed to protect the health and safety of workers engaged in operations at hazardous waste sites, hazardous waste treatment facilities, and emergency response locations. HAZWOPER covers issues such as training, medical surveillance, and maximum exposure limits.

## SUMMARY

Several major environmental statutes work together to address hazardous waste problems. These include media-specific statutes that limit the amount of waste released into a particular environmental medium, and other statutes that directly control the production of certain products, and protect workers managing hazardous wastes. These statutes are:

- Clean Air Act
- Clean Water Act
- Safe Drinking Water Act
- Emergency Planning and Community Right-to-Know Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Toxic Substances Control Act
- Marine Protection, Research, and Sanctuaries Act
- Occupational Safety and Health Act.

## ADDITIONAL RESOURCES

Full-text versions of the major environmental laws administered by EPA can be found at www.epa.gov/lawsregs/laws/index.html.

# CERCLA: THE HAZARDOUS WASTE CLEANUP PROGRAM



## OVERVIEW

This chapter focuses on the **Comprehensive Environmental Response, Compensation, and Liability Act** (CERCLA), which is a central part of the legislative framework for environmental protection. CERCLA is also commonly known as **Superfund**.

Whereas RCRA is a proactive program that regulates how wastes should be managed to avoid potential threats to human health and the environment, CERCLA is designed to remedy threats to human health and the environment from unexpected releases and historical mistakes in hazardous waste management. More specifically, RCRA authorizes a general regulatory program to manage all hazardous wastes from cradle to grave (i.e., from generation to ultimate disposal), while CERCLA authorizes a number of government actions to remedy the conditions that could result in a release or the effects of a release itself. Both RCRA and CERCLA authorize EPA to act in the event of an imminent hazard.

This chapter discusses why CERCLA was enacted, summarizes the Law, and examines the major areas where the CERCLA and RCRA programs interact.

**RCRA VS. CERCLA**

RCRA regulates how wastes should be managed to avoid potential threats to human health and the environment. CERCLA, on the other hand, comes into play when mismanagement occurs or has occurred (i.e., when there has been a release or a substantial threat of a release in the environment of a hazardous substance or of a pollutant or contaminant that presents an imminent and substantial threat to human health).

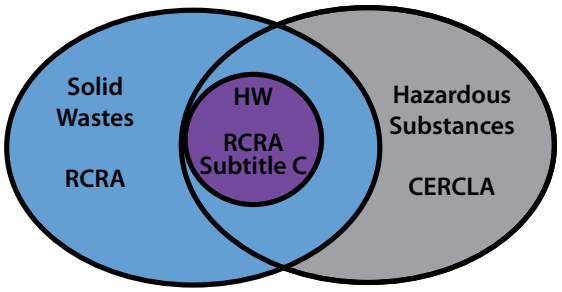
## DEFINITIONS

RCRA and CERCLA both address hazards to the environment. However, CERCLA is a more comprehensive statute. CERCLA hazardous substances encompass RCRA hazardous wastes, as well as other toxic pollutants regulated by the Clean Air Act (CAA), the Clean Water Act (CWA), and the Toxic Substances Control Act (TSCA). Thus, all RCRA hazardous wastes are regulated as CERCLA hazardous substances, and releases of hazardous wastes may trigger CERCLA release notification requirements or response actions. RCRA nonhazardous solid wastes, on the other hand, do not trigger CERCLA response actions unless they

contain another hazardous substance or present an imminent and substantial danger as pollutants or contaminants (see Figure VI-1).

In addition to hazardous substances, CERCLA authorizes EPA to respond to releases and potential releases of **pollutants or contaminants**, which are broadly defined to include any substance that is reasonably anticipated to cause illness or deformation in any organism. All three definitions specifically exclude petroleum and natural gas.

***Figure VI-1: Relationship Between CERCLA Hazardous Substances and RCRA Hazardous Wastes***




*CERCLA hazardous substances encompass RCRA hazardous wastes as well as other toxic pollutants regulated by CAA, CWA, and TSCA. RCRA nonhazardous solid wastes do not trigger CERCLA response actions unless they contain another hazardous substance or present an imminent and substantial danger to human health and the environment as pollutants or contaminants.*

## HISTORY AND PURPOSE OF CERCLA

CERCLA was established in response to the discovery, in the late 1970s, of a large number of abandoned, leaking, hazardous waste dumps that were a threat to human health and the environment. One of the best known examples is Love Canal (Niagara Falls, New York), where a chemical company buried large amounts of hazardous waste in an abandoned canal. In the mid-1950s, the company capped the canal with clay and soil and sold the land to the city of Niagara Falls for development.

In the 1970s, an unusual number of community residents developed serious health problems. Moreover, the residents complained of noxious fumes and chemicals oozing out of the ground. Subsequent government investigations found extensive contamination of the area, including groundwater supplies. In 1978, President Carter declared Love Canal a federal disaster area, and most of the residents in the area around the site were relocated.

At the time, declaring the site a federal disaster area was the only viable option available to the federal government. RCRA could not provide relief because the problem did not involve the current or future management of wastes. Legal actions against the responsible parties could not offer a timely solution because such action was time consuming and costly. In addition, subsequent investigations indicated that the scope of the historical contamination problem went far beyond Love Canal, making the federal disaster relief option impractical. In December of 1980, Congress passed CERCLA to address uncontrollable hazardous waste sites throughout the country.

CERCLA amended the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to provide a regulatory blueprint for federal response to releases of hazardous substances, pollutants, and contaminants (40 CFR Part 300). The primary objectives of the Superfund program include the following:

- Identify those sites where releases of hazardous substances have already occurred or might occur and posed a serious threat to human health, welfare, or the environment
- Take appropriate action to remedy the releases
- Force those parties responsible for the release to pay for the cleanup actions.

To accomplish these tasks, CERCLA provided the federal government with new response authority, created a $1.6 billion trust fund to pay for federal response actions, and imposed cleanup liability on **potentially responsible parties** (PRPs). The "Super Fund" was established primarily by tax assessments on oil and designated chemicals.

Unfortunately, it became apparent that the problem of abandoned hazardous waste sites

**SUPERFUND REAUTHORIZATION AND TAXING AUTHORITY**

The Superfund Amendments and Reauthorization Act (SARA) not only reauthorized the Superfund program for another five years, but it also increased the Fund from $1.6 billion to $8.5 billion. The taxing authority of SARA was to expire on December 31, 1991; however, the Omnibus Reconciliation Act of 1990 extended the taxes without modification for another four years, through December 31, 1995. Separately, the Superfund program was reauthorized, without changes to the text of the Statute, until September 30, 1994, a three-year extension from the expiration date of the SARA authorization in 1991. Congress failed to reauthorize the Superfund program before September 30, 1994 (the end of the fiscal year); however, the program is still operating because Congress continues to appropriate funds to the Superfund program.

was more extensive than originally thought and its solution would be more complex and time consuming. Unlike RCRA response actions where the owner and operator of a site are known, CERCLA may deal with environmental threats due to historical activities and, thus, the responsible party may be unknown, no longer in existence (e.g., a defunct company), or unable to pay. To address these additional concerns, Congress passed the Superfund Amendments and Reauthorization Act (SARA) of 1986. SARA not only reauthorized the Superfund program for another five years, but it also increased the fund from a total of $1.6 billion to $8.5 billion. In addition, SARA established new standards and schedules for site cleanup, created new programs for informing the public of risks from hazardous substances in their community, and helped prepare communities for hazardous substance emergencies.

## TRIGGER FOR STATUTORY RESPONSE

CERCLA response authorities are triggered by a release or a substantial threat of release of dangerous substances into the environment (e.g., a chemical spill from a tank truck accident or a leak from a damaged drum). The release must involve either:

- a hazardous substance, or
- a pollutant or contaminant.

In addition, a release must pose an imminent or substantial threat to the public health or welfare.

## TYPES OF RESPONSE ACTIONS

Once a potential release has been identified, the information is entered into the **Comprehensive Environmental Response, Compensation, and Liability Information System** (CERCLIS), a computerized database used to track hazardous substance sites. After being entered into CERCLIS, each site undergoes a **preliminary assessment** (PA) to determine if the site poses a potential hazard and whether further action is necessary. If the threat is immediate, a **removal action** may be conducted.

Removal actions are short-term cleanup actions that address immediate threats at a site. They are conducted in response to an emergency situation (e.g., to avert an explosion, to cleanup a hazardous waste spill, or to stabilize a site until a permanent remedy can be found). Removal actions are limited to 12 months duration or $2 million in expenditures, although in certain cases these limits may be extended. Removals may occur at any point in time after the PA has been conducted and may be conducted in addition to remedial actions.

R**emedial actions** are response actions that ultimately represent the final remedy for a site and generally are more expensive and of a longer duration than removals. In the event that long-term cleanup is necessary, the site is referred to the remedial program for further investigation and assessment.

If the PA reveals that a remedial action is necessary, EPA will conduct a more involved study of the site during a **site inspection** (SI). Based on data collected during the PA and the SI, EPA will evaluate the site using the **Hazard Ranking System** (HRS), a scoring system that determines the relative risk to public health and the environment posed by hazardous substances in ground water, surface water, air, and soil. Only those sites with a score of 28.5 (on a scale from 0 to 100) are eligible for placement on the **National Priorities List** (NPL), EPA's list of priority hazardous substance sites for cleanup. Fund monies are only available for remedial actions

at (non-federal facility) hazardous waste sites on the NPL. As of June 2011, there are over 1,350 sites either on the NPL or proposed for inclusion. The majority of sites are placed on the NPL based on their HRS score. Under some circumstances, sites may also be placed on the NPL by the state in which the site is located or by the Agency for Toxic Substances and Disease Registry (ATSDR) in accordance with EPA.

Once a site is placed on the NPL, the remedial process begins. A remedial action has two main phases. The first phase, the **remedial investigation/ feasibility study** (RI/FS), involves evaluating conditions at the site, defining any problems, and comparing alternative site cleanup methods. After the remedy has been selected, the decision is documented in the **record of decision** (ROD). The second phase, the **remedial design/remedial action** (RD/RA), involves designing the chosen cleanup and beginning construction.

Following the implementation of the remedy, the state or the PRP assumes responsibility for the **operation and maintenance** (O&M) of the site, which may include such activities as ground water pump and treat and cap maintenance. Once EPA has determined that all appropriate response actions have been taken and cleanup goals have been achieved, the site is deleted from the NPL through a formal rulemaking process.

EPA is committed to early and meaningful community participation during Superfund response actions. CERCLA, as implemented by the NCP, requires specific community involvement activities that must occur at certain points throughout the Superfund process. These activities include, but are not limited to, public meetings, requests for public comment, and availability of Superfund decision documents. In addition, most sites deleted from the NPL are still subject to **five-year reviews** to ensure the remedy continues to be protective of human health and the environment.

## RCRA AND REMEDY SELECTION UNDER CERCLA

Rather than establishing individual cleanup standards, CERCLA assures that remedies are based on cleanup standards and criteria established by other laws (e.g., CAA, CWA, and RCRA) in conjunction with site-specific risk factors. CERCLA specifically requires that remedies attain any legally **applicable or relevant and appropriate requirements** (ARARs) (i.e., standards, criteria, or limitations under federal or more stringent state environmental laws). For example, whenever a remedial action involves on-site treatment, storage, or disposal of hazardous waste, the action must meet RCRA's technical standards for such treatment, storage, or disposal (as discussed in Chapter III, Regulations Governing Treatment, Storage, and Disposal Facilities).

Once hazardous wastes are transported from a CERCLA site, they are subject to full RCRA regulation. Therefore, all transportation and treatment, storage, and disposal facility (TSDF) requirements under RCRA must be followed. This means that off-site shipments must be accompanied by a manifest. In particular, the off-site disposal of hazardous wastes can occur only at a RCRA facility in a unit in full compliance with the Subtitle C requirements.

For off-site land disposal of wastes resulting from a CERCLA activity, the program requires the following: First, the unit in which the wastes are to be disposed must not be releasing hazardous wastes or constituents into ground water, surface water, or soil. Second, any releases from other units of the facility must be under an approved RCRA corrective

**WHAT ARE ARARS?**

CERCLA specifically requires that remedies attain any legally applicable or relevant and appropriate requirements (ARARs) (i.e., standards, criteria, or limitations under federal or more stringent state environmental laws). For example, whenever a remedial action involves on-site treatment, storage, or disposal of hazardous waste, the action must meet RCRA's technical standards for such treatment, storage, or disposal. The NCP details the application of ARARs to Superfund remedial actions.

action program. This policy assures that wastes shipped off site from CERCLA sites are sent to environmentally sound waste management facilities.

Finally, EPA may not take or fund remedial actions in a state unless the state ensures the availability of hazardous waste treatment and disposal capacity by submitting a **capacity assurance plan** (CAP) to EPA. Under a CAP, a state assures the availability of treatment or disposal facilities that meet the following requirements: First, the treatment and disposal facilities must be in compliance with RCRA Subtitle C requirements. Second, the facilities must have the capacity to adequately manage hazardous wastes projected to be generated within the state over 20 years. This requirement limits and manages the amount of hazardous waste generated in the United States by encouraging waste minimization and recycling, interstate agreements, and efficient and realistic hazardous waste management systems. Currently, every state in the nation has submitted a CAP to EPA.

## RCRA CORRECTIVE ACTION VS. CERCLA RESPONSE

The cleanup of a site with hazardous waste contamination may be handled under either CERCLA, as described above, or RCRA. RCRA authorizes EPA to require corrective action (under an enforcement order or as part of a permit) whenever there is, or has been, a release of hazardous waste or constituents at TSDFs. RCRA also provides similar corrective action authority in response to releases at interim status facilities. Further, RCRA allows EPA to require corrective action beyond the facility boundary. EPA interprets the term corrective action (as discussed in Chapter III, Corrective Action to Clean Up Hazardous Waste Contamination) to cover the full range of possible actions, from studies and interim measures to full cleanups.

RCRA and CERCLA cleanup programs have roughly the same approach to cleanups. In both, examinations of available data are made after discovery of a release to determine if an emergency action is warranted. Both programs authorize short-term measures to abate immediate adverse effects of a release. In addition, once an emergency has been addressed, both programs provide for appropriate investigation to establish long-term cleanup options. One major difference between the two programs involves funding. CERCLA allows for the expenditure of Fund monies for removal actions and remedial actions at NPL sites (non-federal facility), in addition to strong liability provisions to ensure that the polluter pays whenever possible. There is no comparable fund under the RCRA corrective action program because the owner or operator of the site is responsible for the cost of the cleanup in all instances.

Another difference between the two programs is the implementation. The facility owner or operator implements RCRA corrective action. On the other hand, a number of different parties can implement a CERCLA remedial action in a number of different ways. For example, agreements may be reached that allow PRPs, the state, or the federal government to assume the lead for certain portions of a response action.

Generally, cleanups conducted solely under RCRA corrective action or CERCLA response authority will substantively satisfy the requirements of both programs. It is EPA's general policy for facilities subject to both CERCLA and RCRA to be deferred to RCRA authority. In some cases, however, it may be more appropriate to use both RCRA and CERCLA authorities. EPA has many procedures in place to facilitate coordination between RCRA and CERCLA programs.

## IMMINENT HAZARDS UNDER RCRA AND CERCLA

Both RCRA and CERCLA contain provisions that allow EPA to require persons contributing to an imminent hazard to take the necessary actions to clean up releases. RCRA's §7003 imminent and substantial endangerment provision addresses nonhazardous as well as hazardous solid waste releases. The authority under CERCLA §106 is essentially the same, except that CERCLA's authority to force abatement of an imminent or substantial danger to public health or the environment is limited to hazardous substance

releases. In an enforcement action, the RCRA and CERCLA imminent hazard provisions may be used in tandem to ensure adequate protection of human health and the environment.

## SUMMARY

CERCLA authorizes cleanup responses whenever there is a release, or a substantial threat of a release, of a hazardous substance, a pollutant, or a contaminant, that presents an imminent and substantial danger to human health or the environment. After the discovery of a potential release, the site is entered into CERCLIS, and undergoes a PA. If there is an immediate hazard, EPA may require a removal action. If long-term remediation is necessary, EPA will conduct an SI, evaluate the site using the HRS, and possibly place the site on the NPL. After NPL listing, a site undergoes further investigation (RI/FS) and remedial alternatives are evaluated. After a remedy has been selected, the decision is documented in the ROD, the RD/RA is implemented, and the state or PRP assumes responsibility for O & M of the site. When all appropriate remedial actions have been taken and the cleanup goals have been achieved, the site is deleted from the NPL, although if waste remains on site, the action is subject to five-year reviews to ensure that the remedy remains protective of human health and the environment.

In general, RCRA authorizes the safe and protective management of wastes, while CERCLA authorizes cleanup responses whenever there is a release of hazardous substances, pollutants, or contaminants (e.g., hazardous wastes). However, the two programs do contain common elements. For example, RCRA standards may be considered ARARs and can be important in selecting remedies under CERCLA. Moreover, RCRA's corrective action and CERCLA's remedial action use parallel, but not identical, procedures. Finally, both statutes authorize EPA to act in the event of an imminent hazard.

## ADDITIONAL RESOURCES

Additional information about the topics covered in this chapter can be found at www.epa.gov/superfund. Further information about EPA cleanup programs can be found at www.epa.gov/oswer/cleanup.